11. Series

Program Name: Series.java   Input File: series.dat

Find the Nth term of the given series whose ith term is a_i. The series is of the form:

$a_1 = A$

$a_n = B*C^n*a_{n-1}$

Input
The first line is T, the number of series definitions that follow. Each series definition contains 4 integers A, B, C, N separated by a single space.

Output
For each test case, output the Nth term.

Example Input
```
3
3 5 -1 5
1 2 1 4
-2 2 -2 3
```

Constraints
Absolute values of A and B are <= 5; -2 <= C <= 2; 2 <= M <=5

Example Output
```
1875
8
256
```